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EXAMINER	
GALL, LLOYD A	

ART UNIT	PAPER NUMBER
3673	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/710,316	IRGENS ET AL.	
	Examiner	Art Unit	
	Lloyd A. Gall	3673	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *17 September 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-6,8,17 and 19-38* is/are pending in the application.

4a) Of the above claim(s) *25-32* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-6,8,17,19-24 and 33-38* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *01 July 2004* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the subject matter of claims 34 and 35 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered. No new matter may be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 34-38 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. It is submitted that the original specification does not provide support for the "corresponding groove" of claims 34 and 35 as being "on the outer peripheral surface of the locking head". It is also not clear in what sense a groove snaps into a groove, as set forth in claims 34 and 35. In claim 36, line 6, it is also submitted that the original specification does not provide support for "rotatable", and "in contact with said hitch ball".

In view of the above drawing objections and rejections under 35 U.S.C. 112, first paragraph, the respective claims are rejected as best understood, on prior art, as follows.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1, 3, 5, 8 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wilson et al (031) in view of Li (915).

It is first noted that a receiver and an object are not being positively claimed. As seen in figs. 12-17, Wilson et al teaches a receiver lock including a linear shaft 123, 121, a first end of the shaft 123 received within a locking head 122, a second end of the shaft

including a stop member 121 or 26 or 124 having an increased diameter with respect to the first end of the shaft 123 as seen in fig. 12, a key insertion end opposite the shaft insertion end of the lock head 122, a locking mechanism 130 to engage the shaft within the lock head 122, a compressible (column 6, line 19) protective covering 134 on the shaft insertion end of the lock head and including a hole to receive the first end of the shaft, wherein the protective covering 134 has the same diameter as the cylindrical outer peripheral surface of the lock head. With respect to the last line of claim 1, the protective covering 134 of Wilson provides at least some degree of a sealed barrier. Wilson does not teach the covering 134 being mounted so as to partially enclose an axial length of the lock head. As seen in fig. 5, Li teaches a covering member 231 as being mounted to partially enclose an axial length (222) of the lock head 22. It would have been obvious to mount the covering 134 of Wilson to enclose an axial length of the lock head, in view of the teaching of Li, the motivation being to optimize the strength of its connection to the lock head. Applicant should note that with respect to the limitations of claim 1, line 10, it is noted that as seen in the condition of fig. 13 of Wilson, the protective covering 134 will be compressed and provide an interference fit with at least the portion 121 of the shaft. In addition, it would also be expected that axially compressing the covering 134 would also provide a radial force and an interference fit against the portion of the shaft which extends through the covering 134. With respect to the limitations of claim 1, lines 13-14, elements 121 and 126 may both be regarded as the claimed stop member remote from the locking head.

Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wilson et al in view of Li as applied to claim 1 above, and further in view of Signorelli et al (279). In column 10, lines 53-54, Signorelli teaches a washer 49 formed of an elastomeric material. It would have been obvious to modify the compressible covering of Wilson such that it is formed of elastomeric material, in view of the teaching of Signorelli, the motivation being to optimize its sealing capabilities.

Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wilson et al in view of Li as applied to claim 1 above, and further in view of Bailey (771) or Gilbertson et al (601).

Bailey teaches a bent handlebar 28 in fig. 1. Gilbertson teaches a shaft with a bent end 112 in fig. 8. It would have been obvious to utilize a bent handlebar with the handlebar 24 of Wilson et al, which functions as the stop member in fig. 12 of Wilson, in view of the teaching of Bailey, the motivation being to simplify steering of the bicycle. Alternatively, it would have been obvious to substitute a bent end shaft for the shaft end stop member 121 of fig. 13 of Wilson, in view of the teaching of Gilbertson et al, the motivation being to utilize the lock of Wilson as a trailer lock, as taught by Gilbertson et al.

Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wilson et al in view of Li as applied to claim 1 above, and further in view of Li (000).

As seen in fig. 6, Li (000) teaches a protective cap 252 at the key insertion end of the lock head 21 attachable by an external groove in the lock head. It would have been obvious to mount a protective cap over the key insertion end of the lock head of Wilson

et al, in view of the teaching of Li (000), the motivation being to seal the key slot of the lock head against dust or water, as is well known in the lock art.

Claims 1, 3, 5, 8 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wilson et al in view of Li as applied to claim 1 above, and further in view of Wyers (832).

It is first noted that a receiver and an object are not being positively claimed. As seen in figs. 12-17, Wilson et al teaches a receiver lock including a linear shaft 123, 121, a first end of the shaft 123 received within a locking head 122, a second end of the shaft including a stop member 121 or 26 or 124 having an increased diameter with respect to the first end of the shaft 123 as seen in fig. 12, a key insertion end opposite the shaft insertion end of the lock head 122, a locking mechanism 130 to engage the shaft within the lock head 122, a compressible (column 6, line 19) protective covering 134 on the shaft insertion end of the lock head and including a hole to receive the first end of the shaft, wherein the protective covering 134 has the same diameter as the cylindrical outer peripheral surface of the lock head. With respect to the last line of claim 1, the protective covering 134 of Wilson provides at least some degree of a sealed barrier. Wilson does not teach the covering 134 being mounted so as to partially enclose an axial length of the lock head. As seen in fig. 5, Li teaches a covering member 231 as being mounted to partially enclose an axial length (222) of the lock head 22. Wyers teaches a seal 66 at the shaft insertion end of the lock head, which seal inherently provides an interference fit with its shaft. It would have been obvious to mount the covering 134 of Wilson to enclose an axial length of the lock head, in view of the

teaching of Li, the motivation being to optimize the strength of its connection to the lock head. It would have been obvious to modify the covering 134 of Wilson et al such that it functions as a seal and inherently creates an interference fit with its shaft, in view of the teaching of Wyers, the motivation being to protect the interior components of the lock head against dust and water, as is well known in the lock art.

Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wilson et al in view of Li and Wyers as applied to claim 1 above, and further in view of Signorelli et al.

In column 10, lines 53-54, Signorelli teaches a washer 49 formed of an elastomeric material. It would have been obvious to modify the compressible covering of Wilson as modified by Wyers such that it is formed of elastomeric material, in view of the teaching of Signorelli, the motivation being to optimize its sealing capabilities.

Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wilson et al in view of Li and Wyers as applied to claim 1 above, and further in view of Bailey (771) or Gilbertson et al (601).

Bailey teaches a bent handlebar 28 in fig. 1. Gilbertson teaches a shaft with a bent end 112 in fig. 8. It would have been obvious to utilize a bent handlebar with the handlebar 24 of Wilson et al, which functions as the stop member in fig. 12 of Wilson, in view of the teaching of Bailey, the motivation being to simplify steering of the bicycle. Alternatively, it would have been obvious to substitute a bent end shaft for the shaft end stop member 121 of fig. 13 of Wilson, in view of the teaching of Gilbertson et al, the

motivation being to utilize the lock of Wilson as a trailer lock, as taught by Gilbertson et al.

Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wilson et al in view of Li and Wyers as applied to claim 1 above, and further in view of Li (000). As seen in fig. 6, Li (000) teaches a protective cap 252 at the key insertion end of the lock head 21 attachable by an external groove in the lock head. It would have been obvious to mount a protective cap over the key insertion end of the lock head of Wilson et al, in view of the teaching of Li (000), the motivation being to seal the key slot of the lock head against dust or water, as is well known in the lock art.

Claims 17 and 20-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wilson et al in view of Li and Signorelli et al.

It is first noted that a receiver and an object are not being positively claimed. As seen in figs. 12-17, Wilson et al teaches a receiver lock including a linear shaft 123, 121, a first end of the shaft 123 received within a locking head 122, a second end of the shaft including a stop member 121 or 26 or 124 having an increased diameter with respect to the first end of the shaft 123 as seen in fig. 12, a key insertion end opposite the shaft insertion end of the lock head 122, a locking mechanism 130 to engage the shaft within the lock head 122, a compressible (column 6, line 19) protective covering 134 on the shaft insertion end of the lock head and including a hole to receive the first end of the shaft, wherein the protective covering 134 has the same diameter as the cylindrical outer peripheral surface of the lock head. With respect to claim 21, Wilson also teaches a shaft protective cover 24 over the shaft 121 between the lock head 122 and the

second end 26 or 125, 126 of the shaft. The covering 134 of Wilson acts as a seal, at least to some degree. Wilson does not teach the covering 134 being mounted so as to partially enclose an axial length of the lock head. As seen in fig. 5, Li teaches a covering member 231 as being mounted to partially enclose an axial length (222) of the lock head 22. In column 10, lines 53-54, Signorelli teaches a washer 49 formed of an elastomeric material. It would have been obvious to mount the covering 134 of Wilson to enclose an axial length of the lock head, in view of the teaching of Li, the motivation being to optimize the strength of its connection to the lock head. It would have been obvious to modify the compressible covering of Wilson such that it is formed of elastomeric material, in view of the teaching of Signorelli et al, the motivation being to optimize its sealing capabilities. Applicant should note that with respect to the limitations of claim 17, line 9, it is noted that as seen in the condition of fig. 13 of Wilson, the protective covering 134 will be compressed and provide an interference fit with at least the portion 121 of the shaft. In addition, it would also be expected that axially compressing the covering 134 would also provide a radial force and an interference fit against the portion of the shaft which extends through the covering 134. With respect to the limitations of claim 1, lines 12-13, elements 121 and 126 may both be regarded as the claimed stop member remote from the locking head.

Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wilson et al in view of Li and Signorelli et al as applied to claim 17 above, and further in view of Li (000).

As seen in fig. 6, Li teaches a protective cap 252 at the key insertion end of the lock head 21. It would have been obvious to mount a protective cap over the key insertion end of the lock head of Wilson et al, in view of the teaching of Li (000), the motivation being to seal the key slot of the lock head against dust or water, as is well known in the lock art.

Claims 24 and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wilson et al in view of Li and Signorelli et al as applied to claim 17 above, and further in view of Wyers (832).

Wyers teaches a seal 66 at the shaft insertion end of the lock head. It would have been obvious to modify the covering 134 of Wilson et al as modified by Signorelli et al, such that it functions as a seal, in view of the teaching of Wyers, the motivation being to protect the interior components of the lock head against dust and water, as is well known.

Claims 17, 20-22, 24 and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wilson et al in view of Li, Signorelli and Wyers.

It is first noted that a receiver and an object are not being positively claimed. As seen in figs. 12-17, Wilson et al teaches a receiver lock including a linear shaft 123, 121, a first end of the shaft 123 received within a locking head 122, a second end of the shaft including a stop member 121 or 26 or 124 having an increased diameter with respect to the first end of the shaft 123 as seen in fig. 12, a key insertion end opposite the shaft insertion end of the lock head 122, a locking mechanism 130 to engage the shaft within the lock head 122, a compressible (column 6, line 19) protective covering 134 on the

shaft insertion end of the lock head and including a hole to receive the first end of the shaft, wherein the protective covering 134 has the same diameter as the cylindrical outer peripheral surface of the lock head. With respect to claim 21, Wilson also teaches a shaft protective cover 24 over the shaft 121 between the lock head 122 and the second end 26 or 125, 126 of the shaft. The covering 134 of Wilson acts as a seal, at least to some degree. Wilson does not teach the covering 134 being mounted so as to partially enclose an axial length of the lock head. As seen in fig. 5, Li teaches a covering member 231 as being mounted to partially enclose an axial length (222) of the lock head 22. In column 10, lines 53-54, Signorelli teaches a washer 49 formed of an elastomeric material. Wyers teaches a seal 66 at the shaft insertion end of the lock head, which seal inherently provides an interference fit with its shaft. It would have been obvious to mount the covering 134 of Wilson to enclose an axial length of the lock head, in view of the teaching of Li, the motivation being to optimize the strength of its connection to the lock head. It would have been obvious to modify the compressible covering of Wilson such that it is formed of elastomeric material, in view of the teaching of Signorelli et al, the motivation being to optimize its sealing capabilities. It would have been obvious to modify the covering 134 of Wilson et al such that it functions as a seal and inherently creates an interference fit with its shaft, in view of the teaching of Wyers, the motivation being to protect the interior components of the lock head against dust and water, as is well known in the lock art.

Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wilson et al in view of Li and Signorelli et al and Wyers as applied to claim 17 above, and further in view of Li (000).

As seen in fig. 6, Li teaches a protective cap 252 at the key insertion end of the lock head 21. It would have been obvious to mount a protective cap over the key insertion end of the lock head of Wilson et al, in view of the teaching of Li (000), the motivation being to seal the key slot of the lock head against dust or water, as is well known in the lock art.

Claim 34 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wilson et al (031) in view of Li (915) as applied to claim 1 above, and further in view of Li (000).

As seen in fig. 6, Li teaches at cover element 252 that it is well known to provide an internal groove on the cover that snaps on an external groove when the cover is closed. It would have been obvious to modify the covering 134 of Wilson such that it includes an internal groove that snaps on an external groove of the locking head, in view of the teaching of Li, the motivation being to securely attach the covering to the locking head.

Claim 35 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wilson et al (031) in view of Li (915) and Signorelli et al as applied to claim 17 above, and further in view of Li (000).

As seen in fig. 6, Li teaches at cover element 252 that it is well known to provide an internal groove on the cover that snaps on an external groove when the cover is closed. It would have been obvious to modify the covering 134 of Wilson such that it includes an

internal groove that snaps on an external groove of the locking head, in view of the teaching of Li, the motivation being to securely attach the covering to the locking head.

Claims 36-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gilbertson et al (601) in view of Wilson et al (031) and Li (915).

Gilbertson teaches that it is well known to provide a locking head and shaft (see fig. 4) to be used with a trailer latch 16 and hitch ball, as seen in fig. 1. As seen in figs. 12-17, Wilson et al teaches a receiver lock including a linear shaft 123, 121, a first end of the shaft 123 received within a locking head 122, a second end of the shaft including a stop member 121 or 26 or 124 having an increased diameter with respect to the first end of the shaft 123 as seen in fig. 12, a key insertion end opposite the shaft insertion end of the lock head 122, a locking mechanism 130 to engage the shaft within the lock head 122, a compressible (column 6, line 19) protective covering 134 on the shaft insertion end of the lock head and including a hole to receive the first end of the shaft, wherein the protective covering 134 has the same diameter as the cylindrical outer peripheral surface of the lock head. As seen in fig. 5, Li teaches a covering member 231 as being mounted to partially enclose an axial length (222) of the lock head 22. It would have been obvious to substitute a compressible protective covering 134 and the locking head of Wilson et al for the locking head of Gilbertson et al to provide an interference fit with the shaft of Gilbertson, the motivation being to seal the internal components of the locking head against the elements. It would have been obvious to mount the protective covering 134 of Gilbertson et al as modified by Wilson et al to enclose an axial length of

the lock head, in view of the teaching of Li, the motivation being to optimize the strength of its connection to the lock head.

Applicant's arguments with respect to claims 1-6, 8, 17, 19-24 and 33-38 have been considered but are moot in view of the new ground(s) of rejection.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lloyd A. Gall whose telephone number is 571-272-7056. The examiner can normally be reached on Monday-Friday, 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patricia Engle can be reached on 571-272-6660. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Lloyd A. Gall
Primary Examiner
Art Unit 3673

LG LG
November 16, 2007